

Meteorcomm LLC.

TEST REPORT FOR

**Base 24V
Model: 63030-24**

Tested To The Following Standards:

**Spurious Emissions Only
In Accordance With
FCC Part 80 and Part 90I**

Report No.: 94195-12

Date of issue: March 22, 2013



This test report bears the accreditation symbol indicating that the testing performed herein meets the test and reporting requirements of ISO/IEC 17025 under the applicable scope of EMC testing for CKC Laboratories, Inc.

We strive to create long-term, trust based relationships by providing sound, adaptive, customer first testing services. We embrace each of our customers' unique EMC challenges, not as an interruption to set processes, but rather as the reason we are in business.

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ADMINISTRATIVE INFORMATION

Test Report Information

REPORT PREPARED FOR:

Meteorcomm LLC.
1201 SW 7th Street
Renton, WA 98057

Representative: Fred Cleveland
Customer Reference Number: 12399

DATE OF EQUIPMENT RECEIPT:**DATE(S) OF TESTING:****REPORT PREPARED BY:**

Dianne Dudley
CKC Laboratories, Inc.
5046 Sierra Pines Drive
Mariposa, CA 95338

Project Number: 94195

March 13, 2013

March 13, 2013

Report Authorization

The test data contained in this report documents the observed testing parameters pertaining to and are relevant for only the sample equipment tested in the agreed upon operational mode(s) and configuration(s) as identified herein. Compliance assessment remains the client's responsibility. This report may not be used to claim product endorsement by A2LA or any government agencies. This test report has been authorized for release under quality control from CKC Laboratories, Inc.

A handwritten signature in black ink that reads "Steve Behm".

Steve Behm
Director of Quality Assurance & Engineering Services
CKC Laboratories, Inc.

Test Facility Information



Our laboratories are configured to effectively test a wide variety of product types. CKC utilizes first class test equipment, anechoic chambers, data acquisition and information services to create accurate, repeatable and affordable test results.

TEST LOCATION(S):
CKC Laboratories, Inc.
22116 23rd Drive S.E., Suite A
Bothell, WA 98021-4413

Software Versions

CKC Laboratories Proprietary Software	Version
EMITest Emissions	5.00.14
Immunity	5.00.07

Site Registration & Accreditation Information

Location	CB #	TAIWAN	CANADA	FCC	JAPAN
Bothell	US0081	SL2-IN-E-1145R	3082C-1	318736	A-0148

SUMMARY OF RESULTS

Standard / Specification: FCC Part 80 & Part 90I

Description	Test Procedure/Method	Results
Radiated Spurious Emissions	FCC Part 80 / 47 CFR §80.211(f)	Pass
Radiated Spurious Emissions	FCC Part 90I / 47 CFR §90.210(b)	Pass

Conditions During Testing

This list is a summary of the conditions noted for or modifications made to the equipment during testing.

Summary of Conditions
None

EQUIPMENT UNDER TEST (EUT)

EQUIPMENT UNDER TEST

Base 24V

Manuf: Meteorcomm LLC.
Model: 63030-24
Serial: 63B2000101BK

Programmable Power Supply

Manuf: Ametek
Model: XG100-17MGA
Serial: 1107A05456

GPS Antenna

Manuf: SYNERGY SYSTEMS, LLC
Model: SMA-35
Serial: NA

PERIPHERAL DEVICES

The EUT was tested with the following peripheral device(s):

Laptop

Manuf: DELL
Model: Latitude E6410
Serial: Meteorcomm AN2421

Laptop Power Supply

Manuf: DELL
Model: FA90PE1-00
Serial: NA

Mouse

Manuf: DELL
Model: M-UAR DEL7
Serial: NA

FCC PART 80

This report contains EMC emissions test results under United States Federal Communications Commission (FCC) 47 CFR Part 80 for the filing of applications for licenses to operate radio facilities in the maritime services.

Part 80 Radiated Spurious Emissions

Test Data Sheets

Test Location: CKC Laboratories, Inc. • 22116 23rd Drive SE, Suite A • Bothell, WA 98021 • (425) 402-1717

Customer: **Meteorcomm LLC.**
 Specification: **47 CFR §80.211(f) Spurious Emissions**
 Work Order #: **94195**
 Test Type: **Maximized Emissions**
 Equipment: **Base 24V**
 Manufacturer: Meteorcomm LLC.
 Model: 63030-24
 S/N: 63B2000101BK

Date: 3/13/2013
 Time: 08:57:14
 Sequence#: 8
 Tested By: Steven Pittsford

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN03227	Cable	32026-29080-29080-84	5/2/2011	5/2/2013
	AN02871	Spectrum Analyzer	E4440A	4/22/2011	4/22/2013
T2	AN01271	Preamp	83017A	8/18/2011	8/18/2013
T3	AN03123	Cable	32026-2-29801-12	10/14/2011	10/14/2013
T4	ANP05546	Cable	Heliac	9/7/2012	9/7/2014
T5	AN02308	Preamp	8447D	4/3/2012	4/3/2014
T6	AN01993	Biconilog Antenna	CBL6111C	3/2/2012	3/2/2014
T7	ANP05360	Cable	RG214	12/3/2012	12/3/2014
T8	ANP05366	Cable	RG-214	10/14/2011	10/14/2013
T9	AN00052	Loop Antenna	6502	5/16/2012	5/16/2014
T10	ANP05965	Cable	Various	8/26/2011	8/26/2013
T11	AN01467	Horn Antenna-ANSI C63.5 Calibration	3115	10/19/2011	10/19/2013

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Programmable Power Supply	Ametek	XG100-17MGA	1107A05456
Base 24V*	Meteorcomm LLC.	63030-24	63B2000101BK
GPS Antenna	SYNERGY SYSTEMS, LLC	SMA-35	NA

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	DELL	Latitude E6410	Meteorcomm AN2421
Laptop Power Supply	DELL	FA90PE1-00	NA
Mouse	DELL	M-UAR DEL7	NA

Test Conditions / Notes:

Temperature: 21°C
Pressure: 103.4kPa
Humidity: 33%
Frequency: 9kHz-2.5GHz
Device is a transmitter/receiver operating at 217-220MHz. The transmitter is transmitting. Transmitter is tuned for Low and High Frequency (217.6125MHz & 219.9875MHz). Transmit and Receive ports terminated in characteristic load. EUT is powered by 24VDC via support power supply.
Ethernet traffic is established on maintenance port with support equipment located outside the test area. All EUT ports are filled. Below 30MHz CISPR Bandwidths, 30MHz-1GHz, RBW=100kHz VBW=300kHz & 1-2.5GHz, RBW=1MHz VBW=3MHz

Ext Attn: 0 dB

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6	T7	T8					
	MHz	dBμV	T9	T10	T11		Table	dBμV/m	dBμV/m	dB	Ant
1	435.230M	65.6	+0.6	+0.0	+0.0	+0.0	+0.0	58.0	82.2	-24.2	Vert
			-28.0	+17.0	+1.4	+1.4	360		Low		99
			+0.0	+0.0	+0.0						
2	27.208M	50.8	+0.1	+0.0	+0.0	+0.3	+0.0	56.4	82.2	-25.8	Paral
			+0.0	+0.0	+0.0	+0.0	360		Low		99
			+5.2	+0.0	+0.0						
3	27.081M	50.1	+0.1	+0.0	+0.0	+0.3	+0.0	55.7	82.2	-26.5	Paral
			+0.0	+0.0	+0.0	+0.0			High		99
			+5.2	+0.0	+0.0						
4	27.194M	49.9	+0.1	+0.0	+0.0	+0.3	+0.0	55.5	82.2	-26.7	Perpe
			+0.0	+0.0	+0.0	+0.0			High		99
			+5.2	+0.0	+0.0						
5	5.597M	45.5	+0.1	+0.0	+0.0	+0.1	+0.0	55.4	82.2	-26.8	Paral
			+0.0	+0.0	+0.0	+0.0			Low		99
			+9.7	+0.0	+0.0						
6	27.208M	49.6	+0.1	+0.0	+0.0	+0.3	+0.0	55.2	82.2	-27.0	Perpe
			+0.0	+0.0	+0.0	+0.0	360		Low		99
			+5.2	+0.0	+0.0						
7	5.597M	44.5	+0.1	+0.0	+0.0	+0.1	+0.0	54.4	82.2	-27.8	Perpe
			+0.0	+0.0	+0.0	+0.0	357		Low		99
			+9.7	+0.0	+0.0						
8	5.672M	43.8	+0.1	+0.0	+0.0	+0.1	+0.0	53.7	82.2	-28.5	Perpe
			+0.0	+0.0	+0.0	+0.0			High		99
			+9.7	+0.0	+0.0						
9	435.223M	60.9	+0.6	+0.0	+0.0	+0.0	+0.0	53.3	82.2	-28.9	Horiz
			-28.0	+17.0	+1.4	+1.4			Low		99
			+0.0	+0.0	+0.0						

10	439.983M	58.3	+0.6 -28.1 +0.0	+0.0 +17.1 +0.0	+0.0 +1.4 +0.0	+0.0 +1.4 360	+0.0	50.7	82.2 High	-31.5	Vert 168
11	870.445M	50.3	+0.9 -27.5 +0.0	+0.0 +22.8 +0.0	+0.0 +2.0 +0.0	+0.0 +2.2 360	+0.0	50.7	82.2 Low	-31.5	Vert 99
12	879.934M	50.0	+0.9 -27.5 +0.0	+0.0 +22.9 +0.0	+0.0 +2.0 +0.0	+0.0 +2.2 360	+0.0	50.5	82.2 High	-31.7	Vert 99
13	439.976M	57.9	+0.6 -28.1 +0.0	+0.0 +17.1 +0.0	+0.0 +1.4 +0.0	+0.0 +1.4	+0.0	50.3	82.2 High	-31.9	Horiz 99
14	870.434M	49.5	+0.9 -27.5 +0.0	+0.0 +22.8 +0.0	+0.0 +2.0 +0.0	+0.0 +2.2	+0.0	49.9	82.2 Low	-32.3	Horiz 99
15	879.933M	49.2	+0.9 -27.5 +0.0	+0.0 +22.9 +0.0	+0.0 +2.0 +0.0	+0.0 +2.2 360	+0.0	49.7	82.2 High	-32.5	Horiz 99
16	659.979M	52.6	+0.8 -28.3 +0.0	+0.0 +20.3 +0.0	+0.0 +1.7 +0.0	+0.0 +1.9	+0.0	49.0	82.2 High	-33.2	Horiz 121
17	652.854M	52.2	+0.8 -28.3 +0.0	+0.0 +20.3 +0.0	+0.0 +1.7 +0.0	+0.0 +1.8 360	+0.0	48.5	82.2 Low	-33.7	Horiz 124
18	652.840M	51.4	+0.8 -28.3 +0.0	+0.0 +20.3 +0.0	+0.0 +1.7 +0.0	+0.0 +1.8 360	+0.0	47.7	82.2 Low	-34.5	Vert 139
19	3.079M	37.4	+0.0 +0.0 +9.7	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.1 +0.0 360	+0.0	47.2	82.2 Low	-35.0	Paral 99
20	3.079M	37.3	+0.0 +0.0 +9.7	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.1 +0.0 360	+0.0	47.1	82.2 Low	-35.1	Perpe 99
21	88.250M	64.6	+0.3 -28.0 +0.0	+0.0 +8.8 +0.0	+0.0 +0.6 +0.0	+0.0 +0.5 360	+0.0	46.8	82.2 Low	-35.4	Vert 101
22	3.165M	36.9	+0.0 +0.0 +9.7	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.1 +0.0	+0.0	46.7	82.2 High	-35.5	Perpe 99
23	89.150M	63.3	+0.3 -28.0 +0.0	+0.0 +8.9 +0.0	+0.0 +0.6 +0.0	+0.0 +0.5 360	+0.0	45.6	82.2 High	-36.6	Vert 99
24	12.537M	34.8	+0.1 +0.0 +9.6	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.2 +0.0 28	+0.0	44.7	82.2 Low	-37.5	Perpe 99
25	12.556M	34.3	+0.1 +0.0 +9.6	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.2 +0.0 360	+0.0	44.2	82.2 Low	-38.0	Paral 99
26	12.687M	33.6	+0.1 +0.0 +9.5	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.2 +0.0	+0.0	43.4	82.2 High	-38.8	Perpe 99

27	12.425M	33.2	+0.1 +0.0 +9.6	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.2 +0.0 359	+0.0	43.1	82.2 High	-39.1	Paral 99
28	10.209M	32.9	+0.1 +0.0 +9.9	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.2 +0.0	+0.0	43.1	82.2 High	-39.1	Perpe 99
29	1200.000M	55.4	+1.0 +0.0 +0.0	-35.9 +0.0 +1.3	+0.3 +0.0 +20.2	+0.0 +0.0 360	+0.0	42.3	82.2 Low	-39.9	Vert 99
30	1100.100M	55.8	+1.0 +0.0 +0.0	-36.3 +0.0 +1.2	+0.3 +0.0 +19.8	+0.0 +0.0 360	+0.0	41.8	82.2 High	-40.4	Horiz 106
31	30.000M	52.1	+0.2 -28.0 +0.0	+0.0 +17.0 +0.0	+0.0 +0.3 +0.0	+0.0 +0.2	+0.0	41.8	82.2 Low	-40.4	Vert 99
32	2224.917M	45.1	+1.5 +0.0 +0.0	-34.2 +0.0 +1.8	+0.4 +0.0 +26.5	+0.0 +0.0	+0.0	41.1	82.2 Low	-41.1	Horiz 99
33	95.360M	58.0	+0.3 -27.9 +0.0	+0.0 +9.5 +0.0	+0.0 +0.6 +0.0	+0.0 +0.5	+0.0	41.0	82.2 Low	-41.2	Horiz 200
34	600.005M	45.1	+0.7 -28.3 +0.0	+0.0 +20.0 +0.0	+0.0 +1.6 +0.0	+0.0 +1.7 360	+0.0	40.8	82.2 High	-41.4	Vert 101
35	1088.000M	54.9	+0.9 +0.0 +0.0	-36.4 +0.0 +1.2	+0.3 +0.0 +19.7	+0.0 +0.0 360	+0.0	40.6	82.2 Low	-41.6	Horiz 130
36	659.956M	44.1	+0.8 -28.3 +0.0	+0.0 +20.3 +0.0	+0.0 +1.7 +0.0	+0.0 +1.9 360	+0.0	40.5	82.2 High	-41.7	Vert 146
37	1100.150M	54.5	+1.0 +0.0 +0.0	-36.3 +0.0 +1.2	+0.3 +0.0 +19.8	+0.0 +0.0	+0.0	40.5	82.2 High	-41.7	Vert 99
38	599.994M	44.8	+0.7 -28.3 +0.0	+0.0 +20.0 +0.0	+0.0 +1.6 +0.0	+0.0 +1.7	+0.0	40.5	82.2 Low	-41.7	Vert 99
39	31.300k	30.4	+0.0 +0.0 +9.9	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 360	+0.0	40.3	82.2 High	-41.9	Paral 99
40	95.060M	57.3	+0.3 -27.9 +0.0	+0.0 +9.5 +0.0	+0.0 +0.6 +0.0	+0.0 +0.5 360	+0.0	40.3	82.2 High	-41.9	Horiz 207
41	2224.700M	44.2	+1.5 +0.0 +0.0	-34.2 +0.0 +1.8	+0.4 +0.0 +26.5	+0.0 +0.0	+0.0	40.2	82.2 High	-42.0	Horiz 99
42	31.270k	30.1	+0.0 +0.0 +9.9	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 132	+0.0	40.0	82.2 Low	-42.2	Paral 99
43	600.004M	44.1	+0.7 -28.3 +0.0	+0.0 +20.0 +0.0	+0.0 +1.6 +0.0	+0.0 +1.7 360	+0.0	39.8	82.2 High	-42.4	Horiz 115

44	19.822M	31.7	+0.1 +0.0 +7.8	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.2 +0.0 49	+0.0	39.8	82.2 Low	-42.4	Paral 99
45	31.272k	29.9	+0.0 +0.0 +9.9	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0	+0.0	39.8	82.2 Low	-42.4	Perpe 99
46	21.049M	32.2	+0.1 +0.0 +7.3	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.2 +0.0 360	+0.0	39.8	82.2 Low	-42.4	Perpe 99
47	162.390M	54.6	+0.4 -27.5 +0.0	+0.0 +10.7 +0.0	+0.0 +0.8 +0.0	+0.0 +0.8	+0.0	39.8	82.2 High	-42.4	Vert 134
48	1200.025M	52.7	+1.0 +0.0 +0.0	-35.9 +0.0 +1.3	+0.3 +0.0 +20.2	+0.0 +0.0	+0.0	39.6	82.2 Low	-42.6	Horiz 113
49	800.024M	40.2	+0.8 -27.9 +0.0	+0.0 +22.4 +0.0	+0.0 +1.9 +0.0	+0.0 +2.1	+0.0	39.5	82.2 High	-42.7	Horiz 99
50	31.272k	29.4	+0.0 +0.0 +9.9	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0	+0.0 308	39.3	82.2 High	-42.9	Perpe 99
51	165.930M	54.5	+0.4 -27.5 +0.0	+0.0 +10.3 +0.0	+0.0 +0.8 +0.0	+0.0 +0.8	+0.0	39.3	82.2 Low	-42.9	Vert 101
52	10.225M	29.0	+0.1 +0.0 +9.9	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.2 +0.0 360	+0.0	39.2	82.2 High	-43.0	Paral 99
53	1999.850M	43.4	+1.4 +0.0 +0.0	-34.3 +0.0 +1.7	+0.4 +0.0 +26.5	+0.0 +0.0	+0.0 360	39.1	82.2 Low	-43.1	Horiz 99
54	800.003M	39.7	+0.8 -27.9 +0.0	+0.0 +22.4 +0.0	+0.0 +1.9 +0.0	+0.0 +2.1 360	+0.0	39.0	82.2 Low	-43.2	Horiz 100
55	1999.867M	42.9	+1.4 +0.0 +0.0	-34.3 +0.0 +1.7	+0.4 +0.0 +26.5	+0.0 +0.0	+0.0	38.6	82.2 High	-43.6	Vert 99
56	1200.100M	51.7	+1.0 +0.0 +0.0	-35.9 +0.0 +1.3	+0.3 +0.0 +20.2	+0.0 +0.0	+0.0	38.6	82.2 High	-43.6	Horiz 106
57	1200.050M	51.7	+1.0 +0.0 +0.0	-35.9 +0.0 +1.3	+0.3 +0.0 +20.2	+0.0 +0.0	+0.0	38.6	82.2 High	-43.6	Vert 99
58	249.990M	50.6	+0.5 -27.1 +0.0	+0.0 +12.5 +0.0	+0.0 +1.0 +0.0	+0.0 +1.0	+0.0	38.5	82.2 Low	-43.7	Horiz 99
59	61.360M	58.7	+0.2 -28.0 +0.0	+0.0 +6.7 +0.0	+0.0 +0.5 +0.0	+0.0 +0.4 1	+0.0	38.5	82.2 High	-43.7	Vert 99
60	5.691M	28.5	+0.1 +0.0 +9.7	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.1 +0.0 360	+0.0	38.4	82.2 High	-43.8	Paral 99

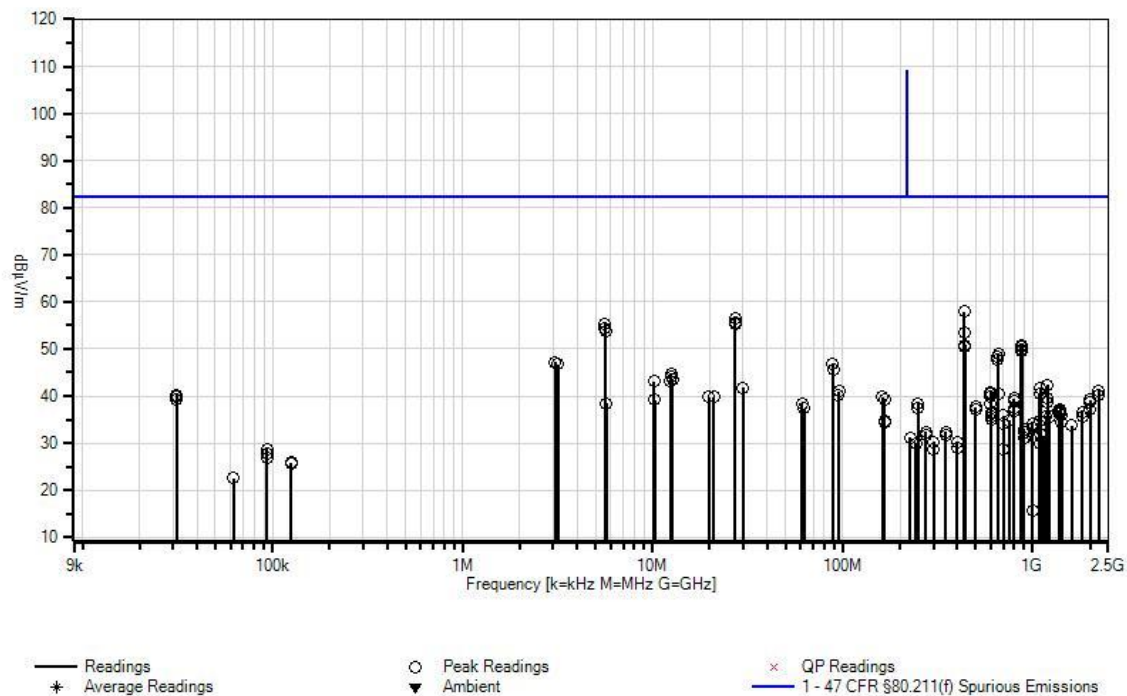
61	600.012M	42.6	+0.7 -28.3 +0.0	+0.0 +20.0 +0.0	+0.0 +1.6 +0.0	+0.0 +1.7	+0.0	38.3	82.2 Low	-43.9	Horiz 99
62	499.982M	44.0	+0.7 -28.2 +0.0	+0.0 +18.2 +0.0	+0.0 +1.4 +0.0	+0.0 +1.6	+0.0	37.7	82.2 High	-44.5	Horiz 163
63	62.460M	57.6	+0.2 -28.0 +0.0	+0.0 +6.7 +0.0	+0.0 +0.5 +0.0	+0.0 +0.4	+0.0	37.4	82.2 Low	-44.8	Vert 101
64	249.987M	49.5	+0.5 -27.1 +0.0	+0.0 +12.5 +0.0	+0.0 +1.0 +0.0	+0.0 +1.0	+0.0 360	37.4	82.2 High	-44.8	Horiz 99
65	799.988M	38.1	+0.8 -27.9 +0.0	+0.0 +22.4 +0.0	+0.0 +1.9 +0.0	+0.0 +2.1	+0.0	37.4	82.2 Low	-44.8	Vert 99
66	1999.800M	41.4	+1.4 +0.0 +0.0	-34.3 +0.0 +1.7	+0.4 +0.0 +26.5	+0.0 +0.0	+0.0 360	37.1	82.2 High	-45.1	Horiz 99
67	500.000M	43.3	+0.7 -28.2 +0.0	+0.0 +18.2 +0.0	+0.0 +1.4 +0.0	+0.0 +1.6	+0.0 360	37.0	82.2 Low	-45.2	Horiz 164
68	1399.967M	48.5	+1.1 +0.0 +0.0	-35.3 +0.0 +1.4	+0.3 +0.0 +21.0	+0.0 +0.0	+0.0 360	37.0	82.2 High	-45.2	Vert 99
69	1400.000M	48.4	+1.1 +0.0 +0.0	-35.3 +0.0 +1.4	+0.3 +0.0 +21.0	+0.0 +0.0	+0.0	36.9	82.2 Low	-45.3	Vert 99
70	1374.767M	48.4	+1.1 +0.0 +0.0	-35.3 +0.0 +1.4	+0.3 +0.0 +20.9	+0.0 +0.0	+0.0	36.8	82.2 High	-45.4	Vert 99
71	800.000M	37.4	+0.8 -27.9 +0.0	+0.0 +22.4 +0.0	+0.0 +1.9 +0.0	+0.0 +2.1	+0.0	36.7	82.2 High	-45.5	Vert 99
72	1824.183M	43.1	+1.3 +0.0 +0.0	-34.6 +0.0 +1.6	+0.3 +0.0 +24.9	+0.0 +0.0	+0.0	36.6	82.2 Low	-45.6	Vert 99
73	1400.167M	48.1	+1.1 +0.0 +0.0	-35.3 +0.0 +1.4	+0.3 +0.0 +21.0	+0.0 +0.0	+0.0 360	36.6	82.2 High	-45.6	Horiz 99
74	1824.183M	43.1	+1.3 +0.0 +0.0	-34.6 +0.0 +1.6	+0.3 +0.0 +24.9	+0.0 +0.0	+0.0 360	36.6	82.2 High	-45.6	Vert 99
75	607.984M	40.7	+0.7 -28.3 +0.0	+0.0 +20.0 +0.0	+0.0 +1.6 +0.0	+0.0 +1.8	+0.0 360	36.5	82.2 High	-45.7	Horiz 115
76	1375.000M	48.0	+1.1 +0.0 +0.0	-35.3 +0.0 +1.4	+0.3 +0.0 +20.9	+0.0 +0.0	+0.0 360	36.4	82.2 Low	-45.8	Vert 99
77	608.004M	40.5	+0.7 -28.3 +0.0	+0.0 +20.0 +0.0	+0.0 +1.6 +0.0	+0.0 +1.8	+0.0	36.3	82.2 High	-45.9	Vert 100

78	1400.050M	47.7	+1.1 +0.0 +0.0	-35.3 +0.0 +1.4	+0.3 +0.0 +21.0	+0.0 +0.0	+0.0	36.2	82.2 Low	-46.0	Horiz 120
79	699.518M	39.1	+0.8 -28.2 +0.0	+0.0 +20.5 +0.0	+0.0 +1.7 +0.0	+0.0 +1.9	+0.0 360	35.8	82.2 High	-46.4	Vert 99
80	1424.750M	47.1	+1.1 +0.0 +0.0	-35.2 +0.0 +1.4	+0.3 +0.0 +21.1	+0.0 +0.0	+0.0 360	35.8	82.2 High	-46.4	Vert 99
81	1174.867M	49.0	+1.0 +0.0 +0.0	-36.0 +0.0 +1.3	+0.3 +0.0 +20.1	+0.0 +0.0	+0.0 5	35.7	82.2 Low	-46.5	Vert 107
82	1175.317M	49.0	+1.0 +0.0 +0.0	-36.0 +0.0 +1.3	+0.3 +0.0 +20.1	+0.0 +0.0	+0.0	35.7	82.2 High	-46.5	Horiz 106
83	1225.075M	48.5	+1.0 +0.0 +0.0	-35.8 +0.0 +1.3	+0.3 +0.0 +20.4	+0.0 +0.0	+0.0 360	35.7	82.2 Low	-46.5	Horiz 99
84	1174.967M	49.0	+1.0 +0.0 +0.0	-36.0 +0.0 +1.3	+0.3 +0.0 +20.1	+0.0 +0.0	+0.0 360	35.7	82.2 High	-46.5	Vert 99
85	608.017M	39.9	+0.7 -28.3 +0.0	+0.0 +20.0 +0.0	+0.0 +1.6 +0.0	+0.0 +1.8	+0.0	35.7	82.2 Low	-46.5	Horiz 99
86	1823.920M	42.0	+1.3 +0.0 +0.0	-34.6 +0.0 +1.6	+0.3 +0.0 +24.9	+0.0 +0.0	+0.0	35.5	82.2 Low	-46.7	Horiz 99
87	1174.920M	48.8	+1.0 +0.0 +0.0	-36.0 +0.0 +1.3	+0.3 +0.0 +20.1	+0.0 +0.0	+0.0 360	35.5	82.2 Low	-46.7	Horiz 112
88	608.010M	39.3	+0.7 -28.3 +0.0	+0.0 +20.0 +0.0	+0.0 +1.6 +0.0	+0.0 +1.8	+0.0	35.1	82.2 Low	-47.1	Vert 99
89	1094.517M	48.9	+0.9 +0.0 +0.0	-36.3 +0.0 +1.2	+0.3 +0.0 +19.8	+0.0 +0.0	+0.0 360	34.8	82.2 Low	-47.4	Vert 99
90	750.004M	36.6	+0.8 -28.0 +0.0	+0.0 +21.5 +0.0	+0.0 +1.9 +0.0	+0.0 +2.0	+0.0 360	34.8	82.2 Low	-47.4	Vert 128
91	165.930M	49.9	+0.4 -27.5 +0.0	+0.0 +10.3 +0.0	+0.0 +0.8 +0.0	+0.0 +0.8	+0.0 2	34.7	82.2 High	-47.5	Horiz 164
92	750.032M	36.4	+0.8 -28.0 +0.0	+0.0 +21.5 +0.0	+0.0 +1.9 +0.0	+0.0 +2.0	+0.0 360	34.6	82.2 High	-47.6	Vert 132
93	165.920M	49.7	+0.4 -27.5 +0.0	+0.0 +10.3 +0.0	+0.0 +0.8 +0.0	+0.0 +0.8	+0.0 360	34.5	82.2 Low	-47.7	Horiz 138
94	1425.000M	45.7	+1.1 +0.0 +0.0	-35.2 +0.0 +1.4	+0.3 +0.0 +21.1	+0.0 +0.0	+0.0	34.4	82.2 Low	-47.8	Vert 99

95	1000.100M	49.4	+0.9 +0.0 +0.0	-36.8 +0.0 +1.2	+0.2 +0.0 +19.3	+0.0 +0.0	+0.0 360	34.2	82.2 High	-48.0	Vert 99
96	699.630M	37.5	+0.8 -28.2 +0.0	+0.0 +20.5 +0.0	+0.0 +1.7 +0.0	+0.0 +1.9	+0.0	34.2	82.2 Low	-48.0	Vert 99
97	1599.800M	43.2	+1.2 +0.0 +0.0	-34.9 +0.0 +1.5	+0.3 +0.0 +22.5	+0.0 +0.0	+0.0	33.8	82.2 High	-48.4	Horiz 99
98	1000.100M	48.3	+0.9 +0.0 +0.0	-36.8 +0.0 +1.2	+0.2 +0.0 +19.3	+0.0 +0.0	+0.0	33.1	82.2 High	-49.1	Horiz 99
99	900.018M	32.1	+0.9 -27.4 +0.0	+0.0 +23.0 +0.0	+0.0 +2.0 +0.0	+0.0 +2.3	+0.0 360	32.9	82.2 Low	-49.3	Horiz 125
100	274.997M	43.8	+0.5 -27.1 +0.0	+0.0 +13.0 +0.0	+0.0 +1.1 +0.0	+0.0 +1.1	+0.0 360	32.4	82.2 Low	-49.8	Horiz 99
101	900.002M	31.6	+0.9 -27.4 +0.0	+0.0 +23.0 +0.0	+0.0 +2.0 +0.0	+0.0 +2.3	+0.0 360	32.4	82.2 High	-49.8	Horiz 135
102	350.007M	41.7	+0.6 -27.4 +0.0	+0.0 +15.0 +0.0	+0.0 +1.2 +0.0	+0.0 +1.2	+0.0 360	32.3	82.2 Low	-49.9	Horiz 99
103	1100.035M	46.0	+1.0 +0.0 +0.0	-36.3 +0.0 +1.2	+0.3 +0.0 +19.8	+0.0 +0.0	+0.0 360	32.0	82.2 Low	-50.2	Horiz 99
104	275.011M	43.2	+0.5 -27.1 +0.0	+0.0 +13.0 +0.0	+0.0 +1.1 +0.0	+0.0 +1.1	+0.0	31.8	82.2 High	-50.4	Horiz 99
105	349.972M	41.0	+0.6 -27.4 +0.0	+0.0 +15.0 +0.0	+0.0 +1.2 +0.0	+0.0 +1.2	+0.0	31.6	82.2 High	-50.6	Horiz 99
106	1147.815M	45.1	+1.0 +0.0 +0.0	-36.1 +0.0 +1.3	+0.3 +0.0 +20.0	+0.0 +0.0	+0.0	31.6	82.2 Low	-50.6	Horiz 129
107	1000.035M	46.7	+0.9 +0.0 +0.0	-36.8 +0.0 +1.2	+0.2 +0.0 +19.3	+0.0 +0.0	+0.0	31.5	82.2 Low	-50.7	Horiz 130
108	227.560M	45.1	+0.4 -27.2 +0.0	+0.0 +11.0 +0.0	+0.0 +0.9 +0.0	+0.0 +1.0	+0.0	31.2	82.2 Low	-51.0	Vert 101
109	900.016M	30.2	+0.9 -27.4 +0.0	+0.0 +23.0 +0.0	+0.0 +2.0 +0.0	+0.0 +2.3	+0.0 83	31.0	82.2 High	-51.2	Vert 99
110	300.011M	41.2	+0.5 -27.1 +0.0	+0.0 +13.5 +0.0	+0.0 +1.1 +0.0	+0.0 +1.1	+0.0	30.3	82.2 Low	-51.9	Horiz 99
111	399.991M	38.5	+0.6 -27.8 +0.0	+0.0 +16.3 +0.0	+0.0 +1.3 +0.0	+0.0 +1.4	+0.0 360	30.3	82.2 High	-51.9	Horiz 99

112	242.650M	42.6	+0.5 -27.1 +0.0	+0.0 +12.0 +0.0	+0.0 +1.0 +0.0	+0.0 +1.0 +0.0	+0.0	30.0	82.2 High	-52.2	Vert 99
113	1087.917M	44.2	+0.9 +0.0 +0.0	-36.4 +0.0 +1.2	+0.3 +0.0 +19.7	+0.0 +0.0 +0.0	+0.0	29.9	82.2 Low	-52.3	Vert 99
114	400.007M	37.2	+0.6 -27.8 +0.0	+0.0 +16.3 +0.0	+0.0 +1.3 +0.0	+0.0 +1.4 +0.0	+0.0 360	29.0	82.2 Low	-53.2	Horiz 100
115	699.991M	32.1	+0.8 -28.2 +0.0	+0.0 +20.5 +0.0	+0.0 +1.7 +0.0	+0.0 +1.9 +0.0	+0.0	28.8	82.2 Low	-53.4	Horiz 103
116	93.710k	19.1	+0.0 +0.0 +9.6	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 360	28.7	82.2 High	-53.5	Paral 99
117	299.987M	39.6	+0.5 -27.1 +0.0	+0.0 +13.5 +0.0	+0.0 +1.1 +0.0	+0.0 +1.1 +0.0	+0.0 360	28.7	82.2 High	-53.5	Horiz 99
118	93.760k	19.0	+0.0 +0.0 +9.6	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	28.6	82.2 Low	-53.6	Paral 99
119	93.762k	18.1	+0.0 +0.0 +9.6	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	27.7	82.2 Low	-54.5	Perpe 99
120	93.621k	17.3	+0.0 +0.0 +9.6	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 360	26.9	82.2 High	-55.3	Perpe 99
121	125.070k	16.4	+0.0 +0.0 +9.5	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	25.9	82.2 Low	-56.3	Paral 99
122	124.931k	16.0	+0.0 +0.0 +9.5	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	25.5	82.2 Low	-56.7	Perpe 99
123	62.530k	13.0	+0.0 +0.0 +9.6	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 360	22.6	82.2 High	-59.6	Paral 99
124	999.917M	50.3	+0.9 +0.0 +0.0	-36.8 +0.0 +1.2	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 360	15.6	82.2 Low	-66.6	Vert 99

CKC Laboratories, Inc. Date: 3/13/2013 Time: 08:57:14 Meteorcomm LLC. WO#: 94195
Test Distance: 3 Meters Sequence#: 8 Horiz
Meteorcomm LLC. Base 24V P/N: 63030-24



Test Setup Photos



FCC PART 90I

This report contains EMC emissions test results under United States Federal Communications Commission (FCC) 47 CFR Part 90I requirements for radio communications systems licensed and used in the Public Safety, Industrial/Business Radio Pool, and Radiolocation Radio Services.

Part 90I Radiated Spurious Emissions

Test Data Sheets

Test Location: CKC Laboratories, Inc. • 22116 23rd Drive SE, Suite A • Bothell, WA 98021 • (425) 402-1717

Customer: **Meteorcomm LLC.**
 Specification: **47 CFR §90.210(b) Spurious Emissions Base 24**
 Work Order #: **94195** Date: 3/13/2013
 Test Type: **Maximized Emissions** Time: 08:57:14
 Equipment: **Base 24V** Sequence#: 8
 Manufacturer: Meteorcomm LLC. Tested By: Steven Pittsford
 Model: 63030-24
 S/N: 63B2000101BK

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN03227	Cable	32026-29080-29080-84	5/2/2011	5/2/2013
	AN02871	Spectrum Analyzer	E4440A	4/22/2011	4/22/2013
T2	AN01271	Preamp	83017A	8/18/2011	8/18/2013
T3	AN03123	Cable	32026-2-29801-12	10/14/2011	10/14/2013
T4	ANP05546	Cable	Heliast	9/7/2012	9/7/2014
T5	AN02308	Preamp	8447D	4/3/2012	4/3/2014
T6	AN01993	Biconilog Antenna	CBL6111C	3/2/2012	3/2/2014
T7	ANP05360	Cable	RG214	12/3/2012	12/3/2014
T8	ANP05366	Cable	RG-214	10/14/2011	10/14/2013
T9	AN00052	Loop Antenna	6502	5/16/2012	5/16/2014
T10	ANP05965	Cable	Various	8/26/2011	8/26/2013
T11	AN01467	Horn Antenna-ANSI C63.5 Calibration	3115	10/19/2011	10/19/2013

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Programmable Power Supply	Ametek	XG100-17MGA	1107A05456
Base 24V*	Meteorcomm LLC.	63030-24	63B2000101BK
GPS Antenna	SYNERGY SYSTEMS, LLC	SMA-35	NA

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	DELL	Latitude E6410	Meteorcomm AN2421
Laptop Power Supply	DELL	FA90PE1-00	NA
Mouse	DELL	M-UAR DEL7	NA

Test Conditions / Notes:

Temperature: 21°C
Pressure: 103.4kPa
Humidity: 33%
Frequency: 9kHz-2.5GHz
Device is a transmitter/receiver operating at 217-220MHz. The transmitter is transmitting. Transmitter is tuned for Low and High Frequency (217.6125MHz & 219.9875MHz). Transmit and Receive ports terminated in characteristic load. EUT is powered by 24VDC via support power supply.
Ethernet traffic is established on maintenance port with support equipment located outside the test area. All EUT ports are filled. Below 30MHz CISPR Bandwidths, 30MHz-1GHz, RBW=100kHz VBW=300kHz & 1-2.5GHz, RBW=1MHz VBW=3MHz

Ext Attn: 0 dB

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
			T5	T6	T7	T8					
	MHz	dBμV	T9	T10	T11		Table	dBμV/m	dBμV/m	dB	Ant
1	435.230M	65.6	+0.6	+0.0	+0.0	+0.0	+0.0	58.0	82.2	-24.2	Vert
			-28.0	+17.0	+1.4	+1.4	360		Low		99
			+0.0	+0.0	+0.0						
2	27.208M	50.8	+0.1	+0.0	+0.0	+0.3	+0.0	56.4	82.2	-25.8	Paral
			+0.0	+0.0	+0.0	+0.0	360		Low		99
			+5.2	+0.0	+0.0						
3	27.081M	50.1	+0.1	+0.0	+0.0	+0.3	+0.0	55.7	82.2	-26.5	Paral
			+0.0	+0.0	+0.0	+0.0			High		99
			+5.2	+0.0	+0.0						
4	27.194M	49.9	+0.1	+0.0	+0.0	+0.3	+0.0	55.5	82.2	-26.7	Perpe
			+0.0	+0.0	+0.0	+0.0			High		99
			+5.2	+0.0	+0.0						
5	5.597M	45.5	+0.1	+0.0	+0.0	+0.1	+0.0	55.4	82.2	-26.8	Paral
			+0.0	+0.0	+0.0	+0.0			Low		99
			+9.7	+0.0	+0.0						
6	27.208M	49.6	+0.1	+0.0	+0.0	+0.3	+0.0	55.2	82.2	-27.0	Perpe
			+0.0	+0.0	+0.0	+0.0	360		Low		99
			+5.2	+0.0	+0.0						
7	5.597M	44.5	+0.1	+0.0	+0.0	+0.1	+0.0	54.4	82.2	-27.8	Perpe
			+0.0	+0.0	+0.0	+0.0	357		Low		99
			+9.7	+0.0	+0.0						
8	5.672M	43.8	+0.1	+0.0	+0.0	+0.1	+0.0	53.7	82.2	-28.5	Perpe
			+0.0	+0.0	+0.0	+0.0			High		99
			+9.7	+0.0	+0.0						
9	435.223M	60.9	+0.6	+0.0	+0.0	+0.0	+0.0	53.3	82.2	-28.9	Horiz
			-28.0	+17.0	+1.4	+1.4			Low		99
			+0.0	+0.0	+0.0						

10	439.983M	58.3	+0.6 -28.1 +0.0	+0.0 +17.1 +0.0	+0.0 +1.4 +0.0	+0.0 +1.4 360	50.7	82.2 High	-31.5	Vert 168
11	870.445M	50.3	+0.9 -27.5 +0.0	+0.0 +22.8 +0.0	+0.0 +2.0 +0.0	+0.0 +2.2 360	50.7	82.2 Low	-31.5	Vert 99
12	879.934M	50.0	+0.9 -27.5 +0.0	+0.0 +22.9 +0.0	+0.0 +2.0 +0.0	+0.0 +2.2 360	50.5	82.2 High	-31.7	Vert 99
13	439.976M	57.9	+0.6 -28.1 +0.0	+0.0 +17.1 +0.0	+0.0 +1.4 +0.0	+0.0 +1.4	50.3	82.2 High	-31.9	Horiz 99
14	870.434M	49.5	+0.9 -27.5 +0.0	+0.0 +22.8 +0.0	+0.0 +2.0 +0.0	+0.0 +2.2	49.9	82.2 Low	-32.3	Horiz 99
15	879.933M	49.2	+0.9 -27.5 +0.0	+0.0 +22.9 +0.0	+0.0 +2.0 +0.0	+0.0 +2.2 360	49.7	82.2 High	-32.5	Horiz 99
16	659.979M	52.6	+0.8 -28.3 +0.0	+0.0 +20.3 +0.0	+0.0 +1.7 +0.0	+0.0 +1.9	49.0	82.2 High	-33.2	Horiz 121
17	652.854M	52.2	+0.8 -28.3 +0.0	+0.0 +20.3 +0.0	+0.0 +1.7 +0.0	+0.0 +1.8 360	48.5	82.2 Low	-33.7	Horiz 124
18	652.840M	51.4	+0.8 -28.3 +0.0	+0.0 +20.3 +0.0	+0.0 +1.7 +0.0	+0.0 +1.8 360	47.7	82.2 Low	-34.5	Vert 139
19	3.079M	37.4	+0.0 +0.0 +9.7	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.1 +0.0 360	47.2	82.2 Low	-35.0	Paral 99
20	3.079M	37.3	+0.0 +0.0 +9.7	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.1 +0.0 360	47.1	82.2 Low	-35.1	Perpe 99
21	88.250M	64.6	+0.3 -28.0 +0.0	+0.0 +8.8 +0.0	+0.0 +0.6 +0.0	+0.0 +0.5 360	46.8	82.2 Low	-35.4	Vert 101
22	3.165M	36.9	+0.0 +0.0 +9.7	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.1 +0.0	46.7	82.2 High	-35.5	Perpe 99
23	89.150M	63.3	+0.3 -28.0 +0.0	+0.0 +8.9 +0.0	+0.0 +0.6 +0.0	+0.0 +0.5 360	45.6	82.2 High	-36.6	Vert 99
24	12.537M	34.8	+0.1 +0.0 +9.6	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.2 +0.0 28	44.7	82.2 Low	-37.5	Perpe 99
25	12.556M	34.3	+0.1 +0.0 +9.6	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.2 +0.0 360	44.2	82.2 Low	-38.0	Paral 99
26	12.687M	33.6	+0.1 +0.0 +9.5	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.2 +0.0	43.4	82.2 High	-38.8	Perpe 99

27	12.425M	33.2	+0.1 +0.0 +9.6	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.2 +0.0 359	+0.0	43.1	82.2 High	-39.1	Paral 99
28	10.209M	32.9	+0.1 +0.0 +9.9	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.2 +0.0	+0.0	43.1	82.2 High	-39.1	Perpe 99
29	1200.000M	55.4	+1.0 +0.0 +0.0	-35.9 +0.0 +1.3	+0.3 +0.0 +20.2	+0.0 +0.0	+0.0 360	42.3	82.2 Low	-39.9	Vert 99
30	1100.100M	55.8	+1.0 +0.0 +0.0	-36.3 +0.0 +1.2	+0.3 +0.0 +19.8	+0.0 +0.0	+0.0 360	41.8	82.2 High	-40.4	Horiz 106
31	30.000M	52.1	+0.2 -28.0 +0.0	+0.0 +17.0 +0.0	+0.0 +0.3 +0.0	+0.0 +0.2	+0.0	41.8	82.2 Low	-40.4	Vert 99
32	2224.917M	45.1	+1.5 +0.0 +0.0	-34.2 +0.0 +1.8	+0.4 +0.0 +26.5	+0.0 +0.0	+0.0	41.1	82.2 Low	-41.1	Horiz 99
33	95.360M	58.0	+0.3 -27.9 +0.0	+0.0 +9.5 +0.0	+0.0 +0.6 +0.0	+0.0 +0.5	+0.0	41.0	82.2 Low	-41.2	Horiz 200
34	600.005M	45.1	+0.7 -28.3 +0.0	+0.0 +20.0 +0.0	+0.0 +1.6 +0.0	+0.0 +1.7	+0.0 360	40.8	82.2 High	-41.4	Vert 101
35	1088.000M	54.9	+0.9 +0.0 +0.0	-36.4 +0.0 +1.2	+0.3 +0.0 +19.7	+0.0 +0.0	+0.0 360	40.6	82.2 Low	-41.6	Horiz 130
36	1100.150M	54.5	+1.0 +0.0 +0.0	-36.3 +0.0 +1.2	+0.3 +0.0 +19.8	+0.0 +0.0	+0.0	40.5	82.2 High	-41.7	Vert 99
37	659.956M	44.1	+0.8 -28.3 +0.0	+0.0 +20.3 +0.0	+0.0 +1.7 +0.0	+0.0 +1.9	+0.0 360	40.5	82.2 High	-41.7	Vert 146
38	599.994M	44.8	+0.7 -28.3 +0.0	+0.0 +20.0 +0.0	+0.0 +1.6 +0.0	+0.0 +1.7	+0.0	40.5	82.2 Low	-41.7	Vert 99
39	95.060M	57.3	+0.3 -27.9 +0.0	+0.0 +9.5 +0.0	+0.0 +0.6 +0.0	+0.0 +0.5	+0.0 360	40.3	82.2 High	-41.9	Horiz 207
40	31.300k	30.4	+0.0 +0.0 +9.9	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0	+0.0 360	40.3	82.2 High	-41.9	Paral 99
41	2224.700M	44.2	+1.5 +0.0 +0.0	-34.2 +0.0 +1.8	+0.4 +0.0 +26.5	+0.0 +0.0	+0.0	40.2	82.2 High	-42.0	Horiz 99
42	31.270k	30.1	+0.0 +0.0 +9.9	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0	+0.0 132	40.0	82.2 Low	-42.2	Paral 99
43	600.004M	44.1	+0.7 -28.3 +0.0	+0.0 +20.0 +0.0	+0.0 +1.6 +0.0	+0.0 +1.7	+0.0 360	39.8	82.2 High	-42.4	Horiz 115

44	19.822M	31.7	+0.1 +0.0 +7.8	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.2 +0.0 49	+0.0	39.8	82.2 Low	-42.4	Paral 99
45	162.390M	54.6	+0.4 -27.5 +0.0	+0.0 +10.7 +0.0	+0.0 +0.8 +0.0	+0.0 +0.8	+0.0	39.8	82.2 High	-42.4	Vert 134
46	21.049M	32.2	+0.1 +0.0 +7.3	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.2 +0.0 360	+0.0	39.8	82.2 Low	-42.4	Perpe 99
47	31.272k	29.9	+0.0 +0.0 +9.9	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0	+0.0	39.8	82.2 Low	-42.4	Perpe 99
48	1200.025M	52.7	+1.0 +0.0 +0.0	-35.9 +0.0 +1.3	+0.3 +0.0 +20.2	+0.0 +0.0	+0.0	39.6	82.2 Low	-42.6	Horiz 113
49	800.024M	40.2	+0.8 -27.9 +0.0	+0.0 +22.4 +0.0	+0.0 +1.9 +0.0	+0.0 +2.1	+0.0	39.5	82.2 High	-42.7	Horiz 99
50	31.272k	29.4	+0.0 +0.0 +9.9	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 308	+0.0	39.3	82.2 High	-42.9	Perpe 99
51	165.930M	54.5	+0.4 -27.5 +0.0	+0.0 +10.3 +0.0	+0.0 +0.8 +0.0	+0.0 +0.8	+0.0	39.3	82.2 Low	-42.9	Vert 101
52	10.225M	29.0	+0.1 +0.0 +9.9	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.2 +0.0 360	+0.0	39.2	82.2 High	-43.0	Paral 99
53	1999.850M	43.4	+1.4 +0.0 +0.0	-34.3 +0.0 +1.7	+0.4 +0.0 +26.5	+0.0 +0.0	+0.0 360	39.1	82.2 Low	-43.1	Horiz 99
54	800.003M	39.7	+0.8 -27.9 +0.0	+0.0 +22.4 +0.0	+0.0 +1.9 +0.0	+0.0 +2.1 360	+0.0	39.0	82.2 Low	-43.2	Horiz 100
55	1999.867M	42.9	+1.4 +0.0 +0.0	-34.3 +0.0 +1.7	+0.4 +0.0 +26.5	+0.0 +0.0	+0.0	38.6	82.2 High	-43.6	Vert 99
56	1200.100M	51.7	+1.0 +0.0 +0.0	-35.9 +0.0 +1.3	+0.3 +0.0 +20.2	+0.0 +0.0	+0.0	38.6	82.2 High	-43.6	Horiz 106
57	1200.050M	51.7	+1.0 +0.0 +0.0	-35.9 +0.0 +1.3	+0.3 +0.0 +20.2	+0.0 +0.0	+0.0	38.6	82.2 High	-43.6	Vert 99
58	249.990M	50.6	+0.5 -27.1 +0.0	+0.0 +12.5 +0.0	+0.0 +1.0 +0.0	+0.0 +1.0	+0.0	38.5	82.2 Low	-43.7	Horiz 99
59	61.360M	58.7	+0.2 -28.0 +0.0	+0.0 +6.7 +0.0	+0.0 +0.5 +0.0	+0.0 +0.4 1	+0.0	38.5	82.2 High	-43.7	Vert 99
60	5.691M	28.5	+0.1 +0.0 +9.7	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.1 +0.0 360	+0.0	38.4	82.2 High	-43.8	Paral 99

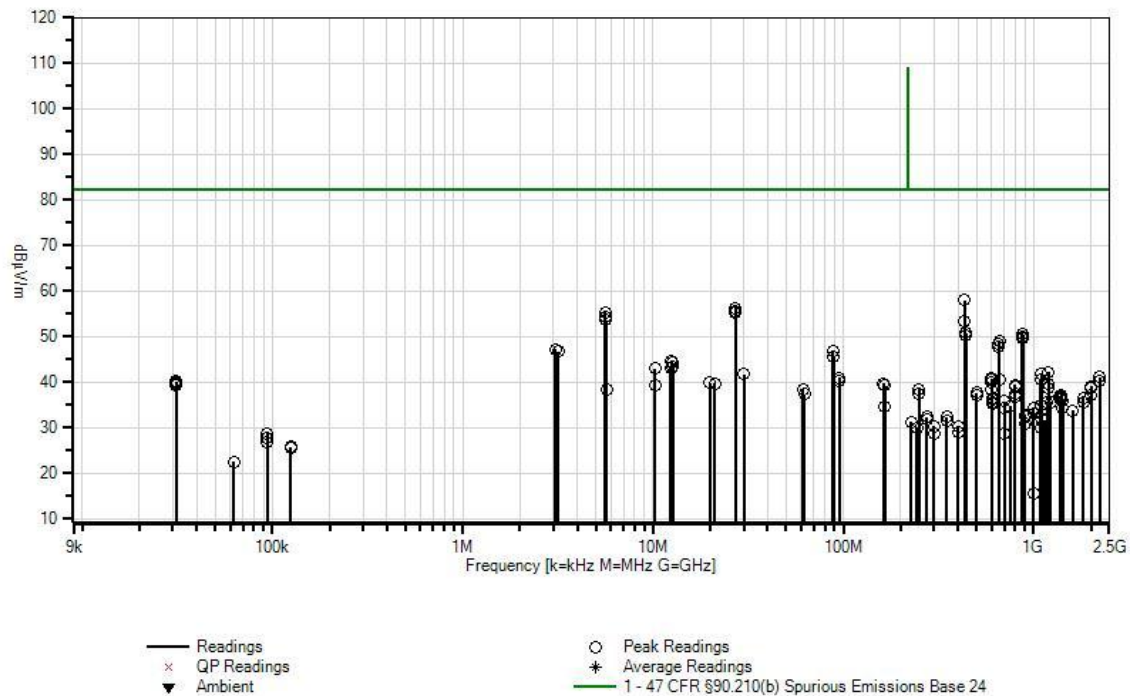
61	600.012M	42.6	+0.7 -28.3 +0.0	+0.0 +20.0 +0.0	+0.0 +1.6 +0.0	+0.0 +1.7	+0.0	38.3	82.2 Low	-43.9	Horiz 99
62	499.982M	44.0	+0.7 -28.2 +0.0	+0.0 +18.2 +0.0	+0.0 +1.4 +0.0	+0.0 +1.6	+0.0	37.7	82.2 High	-44.5	Horiz 163
63	62.460M	57.6	+0.2 -28.0 +0.0	+0.0 +6.7 +0.0	+0.0 +0.5 +0.0	+0.0 +0.4	+0.0	37.4	82.2 Low	-44.8	Vert 101
64	249.987M	49.5	+0.5 -27.1 +0.0	+0.0 +12.5 +0.0	+0.0 +1.0 +0.0	+0.0 +1.0	+0.0 360	37.4	82.2 High	-44.8	Horiz 99
65	799.988M	38.1	+0.8 -27.9 +0.0	+0.0 +22.4 +0.0	+0.0 +1.9 +0.0	+0.0 +2.1	+0.0	37.4	82.2 Low	-44.8	Vert 99
66	1999.800M	41.4	+1.4 +0.0 +0.0	-34.3 +0.0 +1.7	+0.4 +0.0 +26.5	+0.0 +0.0	+0.0 360	37.1	82.2 High	-45.1	Horiz 99
67	500.000M	43.3	+0.7 -28.2 +0.0	+0.0 +18.2 +0.0	+0.0 +1.4 +0.0	+0.0 +1.6	+0.0 360	37.0	82.2 Low	-45.2	Horiz 164
68	1399.967M	48.5	+1.1 +0.0 +0.0	-35.3 +0.0 +1.4	+0.3 +0.0 +21.0	+0.0 +0.0	+0.0 360	37.0	82.2 High	-45.2	Vert 99
69	1400.000M	48.4	+1.1 +0.0 +0.0	-35.3 +0.0 +1.4	+0.3 +0.0 +21.0	+0.0 +0.0	+0.0	36.9	82.2 Low	-45.3	Vert 99
70	1374.767M	48.4	+1.1 +0.0 +0.0	-35.3 +0.0 +1.4	+0.3 +0.0 +20.9	+0.0 +0.0	+0.0	36.8	82.2 High	-45.4	Vert 99
71	800.000M	37.4	+0.8 -27.9 +0.0	+0.0 +22.4 +0.0	+0.0 +1.9 +0.0	+0.0 +2.1	+0.0	36.7	82.2 High	-45.5	Vert 99
72	1824.183M	43.1	+1.3 +0.0 +0.0	-34.6 +0.0 +1.6	+0.3 +0.0 +24.9	+0.0 +0.0	+0.0	36.6	82.2 Low	-45.6	Vert 99
73	1824.183M	43.1	+1.3 +0.0 +0.0	-34.6 +0.0 +1.6	+0.3 +0.0 +24.9	+0.0 +0.0	+0.0 360	36.6	82.2 High	-45.6	Vert 99
74	1400.167M	48.1	+1.1 +0.0 +0.0	-35.3 +0.0 +1.4	+0.3 +0.0 +21.0	+0.0 +0.0	+0.0 360	36.6	82.2 High	-45.6	Horiz 99
75	607.984M	40.7	+0.7 -28.3 +0.0	+0.0 +20.0 +0.0	+0.0 +1.6 +0.0	+0.0 +1.8	+0.0 360	36.5	82.2 High	-45.7	Horiz 115
76	1375.000M	48.0	+1.1 +0.0 +0.0	-35.3 +0.0 +1.4	+0.3 +0.0 +20.9	+0.0 +0.0	+0.0 360	36.4	82.2 Low	-45.8	Vert 99
77	608.004M	40.5	+0.7 -28.3 +0.0	+0.0 +20.0 +0.0	+0.0 +1.6 +0.0	+0.0 +1.8	+0.0	36.3	82.2 High	-45.9	Vert 100

78	1400.050M	47.7	+1.1 +0.0 +0.0	-35.3 +0.0 +1.4	+0.3 +0.0 +21.0	+0.0 +0.0	+0.0	36.2	82.2 Low	-46.0	Horiz 120
79	699.518M	39.1	+0.8 -28.2 +0.0	+0.0 +20.5 +0.0	+0.0 +1.7 +0.0	+0.0 +1.9	+0.0 360	35.8	82.2 High	-46.4	Vert 99
80	1424.750M	47.1	+1.1 +0.0 +0.0	-35.2 +0.0 +1.4	+0.3 +0.0 +21.1	+0.0 +0.0	+0.0 360	35.8	82.2 High	-46.4	Vert 99
81	1174.867M	49.0	+1.0 +0.0 +0.0	-36.0 +0.0 +1.3	+0.3 +0.0 +20.1	+0.0 +0.0	+0.0 5	35.7	82.2 Low	-46.5	Vert 107
82	1225.075M	48.5	+1.0 +0.0 +0.0	-35.8 +0.0 +1.3	+0.3 +0.0 +20.4	+0.0 +0.0	+0.0 360	35.7	82.2 Low	-46.5	Horiz 99
83	1174.967M	49.0	+1.0 +0.0 +0.0	-36.0 +0.0 +1.3	+0.3 +0.0 +20.1	+0.0 +0.0	+0.0 360	35.7	82.2 High	-46.5	Vert 99
84	1175.317M	49.0	+1.0 +0.0 +0.0	-36.0 +0.0 +1.3	+0.3 +0.0 +20.1	+0.0 +0.0	+0.0	35.7	82.2 High	-46.5	Horiz 106
85	608.017M	39.9	+0.7 -28.3 +0.0	+0.0 +20.0 +0.0	+0.0 +1.6 +0.0	+0.0 +1.8	+0.0	35.7	82.2 Low	-46.5	Horiz 99
86	1823.920M	42.0	+1.3 +0.0 +0.0	-34.6 +0.0 +1.6	+0.3 +0.0 +24.9	+0.0 +0.0	+0.0	35.5	82.2 Low	-46.7	Horiz 99
87	1174.920M	48.8	+1.0 +0.0 +0.0	-36.0 +0.0 +1.3	+0.3 +0.0 +20.1	+0.0 +0.0	+0.0 360	35.5	82.2 Low	-46.7	Horiz 112
88	608.010M	39.3	+0.7 -28.3 +0.0	+0.0 +20.0 +0.0	+0.0 +1.6 +0.0	+0.0 +1.8	+0.0	35.1	82.2 Low	-47.1	Vert 99
89	1094.517M	48.9	+0.9 +0.0 +0.0	-36.3 +0.0 +1.2	+0.3 +0.0 +19.8	+0.0 +0.0	+0.0 360	34.8	82.2 Low	-47.4	Vert 99
90	750.004M	36.6	+0.8 -28.0 +0.0	+0.0 +21.5 +0.0	+0.0 +1.9 +0.0	+0.0 +2.0	+0.0 360	34.8	82.2 Low	-47.4	Vert 128
91	165.930M	49.9	+0.4 -27.5 +0.0	+0.0 +10.3 +0.0	+0.0 +0.8 +0.0	+0.0 +0.8	+0.0 2	34.7	82.2 High	-47.5	Horiz 164
92	750.032M	36.4	+0.8 -28.0 +0.0	+0.0 +21.5 +0.0	+0.0 +1.9 +0.0	+0.0 +2.0	+0.0 360	34.6	82.2 High	-47.6	Vert 132
93	165.920M	49.7	+0.4 -27.5 +0.0	+0.0 +10.3 +0.0	+0.0 +0.8 +0.0	+0.0 +0.8	+0.0 360	34.5	82.2 Low	-47.7	Horiz 138
94	1425.000M	45.7	+1.1 +0.0 +0.0	-35.2 +0.0 +1.4	+0.3 +0.0 +21.1	+0.0 +0.0	+0.0	34.4	82.2 Low	-47.8	Vert 99

95	699.630M	37.5	+0.8 -28.2 +0.0	+0.0 +20.5 +0.0	+0.0 +1.7 +0.0	+0.0 +1.9	+0.0	34.2	82.2 Low	-48.0	Vert 99
96	1000.100M	49.4	+0.9 +0.0 +0.0	-36.8 +0.0 +1.2	+0.2 +0.0 +19.3	+0.0 +0.0	+0.0 360	34.2	82.2 High	-48.0	Vert 99
97	1599.800M	43.2	+1.2 +0.0 +0.0	-34.9 +0.0 +1.5	+0.3 +0.0 +22.5	+0.0 +0.0	+0.0	33.8	82.2 High	-48.4	Horiz 99
98	1000.100M	48.3	+0.9 +0.0 +0.0	-36.8 +0.0 +1.2	+0.2 +0.0 +19.3	+0.0 +0.0	+0.0	33.1	82.2 High	-49.1	Horiz 99
99	900.018M	32.1	+0.9 -27.4 +0.0	+0.0 +23.0 +0.0	+0.0 +2.0 +0.0	+0.0 +2.3	+0.0 360	32.9	82.2 Low	-49.3	Horiz 125
100	274.997M	43.8	+0.5 -27.1 +0.0	+0.0 +13.0 +0.0	+0.0 +1.1 +0.0	+0.0 +1.1	+0.0 360	32.4	82.2 Low	-49.8	Horiz 99
101	900.002M	31.6	+0.9 -27.4 +0.0	+0.0 +23.0 +0.0	+0.0 +2.0 +0.0	+0.0 +2.3	+0.0 360	32.4	82.2 High	-49.8	Horiz 135
102	350.007M	41.7	+0.6 -27.4 +0.0	+0.0 +15.0 +0.0	+0.0 +1.2 +0.0	+0.0 +1.2	+0.0 360	32.3	82.2 Low	-49.9	Horiz 99
103	1100.035M	46.0	+1.0 +0.0 +0.0	-36.3 +0.0 +1.2	+0.3 +0.0 +19.8	+0.0 +0.0	+0.0 360	32.0	82.2 Low	-50.2	Horiz 99
104	275.011M	43.2	+0.5 -27.1 +0.0	+0.0 +13.0 +0.0	+0.0 +1.1 +0.0	+0.0 +1.1	+0.0	31.8	82.2 High	-50.4	Horiz 99
105	349.972M	41.0	+0.6 -27.4 +0.0	+0.0 +15.0 +0.0	+0.0 +1.2 +0.0	+0.0 +1.2	+0.0	31.6	82.2 High	-50.6	Horiz 99
106	1147.815M	45.1	+1.0 +0.0 +0.0	-36.1 +0.0 +1.3	+0.3 +0.0 +20.0	+0.0 +0.0	+0.0	31.6	82.2 Low	-50.6	Horiz 129
107	1000.035M	46.7	+0.9 +0.0 +0.0	-36.8 +0.0 +1.2	+0.2 +0.0 +19.3	+0.0 +0.0	+0.0	31.5	82.2 Low	-50.7	Horiz 130
108	227.560M	45.1	+0.4 -27.2 +0.0	+0.0 +11.0 +0.0	+0.0 +0.9 +0.0	+0.0 +1.0	+0.0	31.2	82.2 Low	-51.0	Vert 101
109	900.016M	30.2	+0.9 -27.4 +0.0	+0.0 +23.0 +0.0	+0.0 +2.0 +0.0	+0.0 +2.3	+0.0 83	31.0	82.2 High	-51.2	Vert 99
110	300.011M	41.2	+0.5 -27.1 +0.0	+0.0 +13.5 +0.0	+0.0 +1.1 +0.0	+0.0 +1.1	+0.0	30.3	82.2 Low	-51.9	Horiz 99
111	399.991M	38.5	+0.6 -27.8 +0.0	+0.0 +16.3 +0.0	+0.0 +1.3 +0.0	+0.0 +1.4	+0.0 360	30.3	82.2 High	-51.9	Horiz 99

112	242.650M	42.6	+0.5 -27.1 +0.0	+0.0 +12.0 +0.0	+0.0 +1.0 +0.0	+0.0 +1.0 +0.0	+0.0	30.0	82.2 High	-52.2	Vert 99
113	1087.917M	44.2	+0.9 +0.0 +0.0	-36.4 +0.0 +1.2	+0.3 +0.0 +19.7	+0.0 +0.0 +0.0	+0.0	29.9	82.2 Low	-52.3	Vert 99
114	400.007M	37.2	+0.6 -27.8 +0.0	+0.0 +16.3 +0.0	+0.0 +1.3 +0.0	+0.0 +1.4 +0.0	+0.0 360	29.0	82.2 Low	-53.2	Horiz 100
115	699.991M	32.1	+0.8 -28.2 +0.0	+0.0 +20.5 +0.0	+0.0 +1.7 +0.0	+0.0 +1.9 +0.0	+0.0	28.8	82.2 Low	-53.4	Horiz 103
116	93.710k	19.1	+0.0 +0.0 +9.6	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 360	28.7	82.2 High	-53.5	Paral 99
117	299.987M	39.6	+0.5 -27.1 +0.0	+0.0 +13.5 +0.0	+0.0 +1.1 +0.0	+0.0 +1.1 +0.0	+0.0 360	28.7	82.2 High	-53.5	Horiz 99
118	93.760k	19.0	+0.0 +0.0 +9.6	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	28.6	82.2 Low	-53.6	Paral 99
119	93.762k	18.1	+0.0 +0.0 +9.6	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	27.7	82.2 Low	-54.5	Perpe 99
120	93.621k	17.3	+0.0 +0.0 +9.6	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 360	26.9	82.2 High	-55.3	Perpe 99
121	125.070k	16.4	+0.0 +0.0 +9.5	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	25.9	82.2 Low	-56.3	Paral 99
122	124.931k	16.0	+0.0 +0.0 +9.5	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0	25.5	82.2 Low	-56.7	Perpe 99
123	62.530k	13.0	+0.0 +0.0 +9.6	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 360	22.6	82.2 High	-59.6	Paral 99
124	999.917M	50.3	+0.9 +0.0 +0.0	-36.8 +0.0 +1.2	+0.0 +0.0 +0.0	+0.0 +0.0 +0.0	+0.0 360	15.6	82.2 Low	-66.6	Vert 99

CKC Laboratories, Inc. Date: 3/13/2013 Time: 08:57:14 Meteorcomm LLC. WO#: 94195
 Test Distance: 3 Meters Sequence#: 8 Horiz
 Meteorcomm LLC. Base 24V P/N: 63030-24



Test Setup Photos



SUPPLEMENTAL INFORMATION

Measurement Uncertainty

Uncertainty Value	Parameter
4.73 dB	Radiated Emissions
3.34 dB	Mains Conducted Emissions
3.30 dB	Disturbance Power

The reported measurement uncertainties are calculated based on the worst case of all laboratory environments from CKC Laboratories, Inc. test sites. Only those parameters which require estimation of measurement uncertainty are reported. The reported worst case measurement uncertainty is less than the maximum values derived in CISPR 16-4-2. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k=2$. Compliance is deemed to occur provided measurements are below the specified limits.

Emissions Test Details

TESTING PARAMETERS

Unless otherwise indicated, the following configuration parameters are used for equipment setup: The cables were routed consistent with the typical application by varying the configuration of the test sample. Interface cables were connected to the available ports of the test unit. The effect of varying the position of the cables was investigated to find the configuration that produced maximum emissions. Cables were of the type and length specified in the individual requirements. The length of cable that produced maximum emissions was selected.

The equipment under test (EUT) was set up in a manner that represented its normal use, as shown in the setup photographs. Any special conditions required for the EUT to operate normally are identified in the comments that accompany the emissions tables.

The emissions data was taken with a spectrum analyzer or receiver. Incorporating the applicable correction factors for distance, antenna, cable loss and amplifier gain, the data was reduced as shown in the table below. The corrected data was then compared to the applicable emission limits. Preliminary and final measurements were taken in order to ensure that all emissions from the EUT were found and maximized.

CORRECTION FACTORS

The basic spectrum analyzer reading was converted using correction factors as shown in the highest emissions readings in the tables. For radiated emissions in $\text{dB}\mu\text{V}/\text{m}$, the spectrum analyzer reading in $\text{dB}\mu\text{V}$ was corrected by using the following formula. This reading was then compared to the applicable specification limit.

SAMPLE CALCULATIONS		
	Meter reading	(dBμV)
+	Antenna Factor	(dB)
+	Cable Loss	(dB)
-	Distance Correction	(dB)
-	Preamplifier Gain	(dB)
=	Corrected Reading	(dBμV/m)

TEST INSTRUMENTATION AND ANALYZER SETTINGS

The test instrumentation and equipment listed were used to collect the emissions data. A spectrum analyzer or receiver was used for all measurements. Unless otherwise specified, the following table shows the measuring equipment bandwidth settings that were used in designated frequency bands. For testing emissions, an appropriate reference level and a vertical scale size of 10 dB per division were used.

MEASURING EQUIPMENT BANDWIDTH SETTINGS PER FREQUENCY RANGE			
TEST	BEGINNING FREQUENCY	ENDING FREQUENCY	BANDWIDTH SETTING
CONDUCTED EMISSIONS	150 kHz	30 MHz	9 kHz
RADIATED EMISSIONS	9 kHz	150 kHz	200 Hz
RADIATED EMISSIONS	150 kHz	30 MHz	9 kHz
RADIATED EMISSIONS	30 MHz	1000 MHz	120 kHz
RADIATED EMISSIONS	1000 MHz	>1 GHz	1 MHz

SPECTRUM ANALYZER/RECEIVER DETECTOR FUNCTIONS

The notes that accompany the measurements contained in the emissions tables indicate the type of detector function used to obtain the given readings. Unless otherwise noted, all readings were made in the "positive peak" detector mode. Whenever a "quasi-peak" or "average" reading was recorded, the measurement was annotated with a "QP" or an "Ave" on the appropriate rows of the data sheets. In cases where quasi-peak or average limits were employed and data exists for multiple measurement types for the same frequency then the peak measurement was retained in the report for reference, however the numbering for the affected row was removed and an arrow or carrot ("^") was placed in the far left-hand column indicating that the row above takes precedence for comparison to the limit. The following paragraphs describe in more detail the detector functions and when they were used to obtain the emissions data.

Peak

In this mode, the spectrum analyzer or receiver recorded all emissions at their peak value as the frequency band selected was scanned. By combining this function with another feature called "peak hold," the measurement device had the ability to measure intermittent or low duty cycle transient emission peak levels. In this mode the measuring device made a slow scan across the frequency band selected and measured the peak emission value found at each frequency across the band.

Quasi-Peak

Quasi-peak measurements were taken using the quasi-peak detector when the true peak values exceeded or were within 2 dB of a quasi-peak specification limit. Additional QP measurements may have been taken at the discretion of the operator.

Average

Average measurements were taken using the average detector when the true peak values exceeded or were within 2 dB of an average specification limit. Additional average measurements may have been taken at the discretion of the operator. If the specification or test procedure requires trace averaging, then the averaging was performed using 100 samples or as required by the specification. All other average measurements are performed using video bandwidth averaging. To make these measurements, the test engineer reduces the video bandwidth on the measuring device until the modulation of the signal is filtered out. At this point the measuring device is set into the linear mode and the scan time is reduced.